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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/586,248

07/17/2006

Jan Thorsten Weber

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EXAMINER

CHEN, YUAN L

ART UNIT

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2854

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/586,248	Applicant(s) WEBER ET AL.	
	Examiner Yuan L. Chen	Art Unit 2854	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "a u-shaped profile" of the ring in Claim 24 line 3 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

1. Claim 15 is objected to as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. Claim 15 is directed to “a method for production of a cylinder”. However, the body of Claim 15 only recites a step of making the sleeve rather than the cylinder as intended.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 – 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Busshoff et al. (Pub. No.: US 2003/0157285) in view of Argiros (Patent No.: US 6086969).

With respect to Claim 1, Busshoff et al. disclose in Figs. 1 – 2 and 4 as well as [0036] and [0044]: a cylinder (10) for receiving a printing form, the cylinder being rotatable about a principal symmetry axis (center of the circle in cross sectional view) thereof during a printing operation comprising at least one first sleeve (12), which containing a pultruded ([0044] line 2) carbon fiber reinforced plastic ([0036] lines 4 and 10).

Busshoff et al. do not teach the majority of the carbon fibers in the plastic are aligned essentially parallel to the principal symmetry axis of the cylinder.

However, Argiros discloses in Fig. 4 and column 4 lines 49 - 52: the majority of the carbon fibers (50) in the plastic (column 2 lines 4 – 8) are aligned essentially parallel to the principal symmetry axis of the cylinder (1).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the combination of Busshoff et al.'s cylinder by aligning the majority of the carbon fibers in the plastic essentially parallel to the principal symmetry axis of the cylinder as taught by Argiros for the purpose of providing additional bending resistance to applied load to increase the printing precision.

The modification/combination meets all the limitation of Claim 1.

With respect to Claim 2, the modification/combination meets all the limitations of Claim 2: the cylinder according to claim 1, wherein that an angular deviation between the principal symmetry axis of the cylinder (1) and the majority of the carbon fibers (50) is less than 10° (as shown in Fig. 4 of Argiros).

With respect to Claim 3, the modification/combination meets all the limitations of Claim 3: the cylinder according to claim 1, wherein that the angular deviation between the principal symmetry axis of the cylinder (1) and the majority of the carbon fibers (50) is less than 5° ((Fig. 4 of Argiros).

With respect to Claim 4, the modification/combination meets all the limitations of Claim 4: the cylinder according to claim 1, wherein that the angular deviation between the principal symmetry axis of the cylinder (1) and the majority of the carbon fibers (50) is less than 2° (as shown in Fig. 4 of Argiros).

With respect to Claim 6, the combination of Busshoff et al. and Argiros meets all the limitations of Claim 6 except a device for absorbing the torsional stress.

However, Argiros also discloses in Figs. 3 - 4 and column 4 lines 24 - 31: the cylinder according to claim 1, further comprising a device (16) for absorbing a torsional stress, said devices (16) being arranged to absorb at least a part of the torsional stress (same structural arrangement as in the present invention), which acts on the first sleeve (50) particularly during a change in the speed.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the combination of Busshoff et al. and Argiros' cylinder by including a device for absorbing the torsional stress as also taught by Argiros for the purpose of providing a more effective device for improving the quality of the sleeve to increase the printing precision.

The modification/combination meets all the limitation of Claim 6.

With respect to Claim 7, the modification/combination meets all the limitations of Claim 7: the cylinder according to claim 1, further comprising at least one second sleeve (13 in Figs. 1, 2 and 4 of Busshoff et al.), configured from at least one of a different method, and an alternative material ([0040] lines 1- 3).

With respect to Claim 8, the combination meets all the limitation of Claim 8, as applied to Claims 1 and 7 above, except that the second sleeve is made of a plastic composite material construction.

However, in the same field of endeavor, Argiros discloses in Figs. 3 - 4 and column 4 lines 24 - 31): the second sleeve (16.1) is made of a plastic composite material and a wound and spun CFRP or GFRP construction.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the combination of Busshoff et al.' and Argiros cylinder by including a plastic composite material to the additional sleeve as also taught by Argiros for the purpose of adding strength to the cylinder for a favorable characteristics to the printing.

The modification/combination meets all the limitation of Claim 8.

With respect to Claim 9, the modification/combination meets all the limitations of Claim 9 (Fig. 3 of Argiros): the cylinder according to Claim 8, wherein the plastic composite material is at least one of a wound and spun CFRP or GFRP construction (column 4 lines 24 - 31).

With respect to Claim 10, the modification/combination meets all the limitations of Claim 10 (column 2 lines 13 - 14 of Argiros.): the cylinder according to Claim 7, the second sleeve is made of metal.

With respect to Claim 11, the modification/combination meets all the limitations of Claim 11 (in Fig. 2 and [0039] of Busshoff et al.): at least one of the first sleeves (12) and the second sleeves (13) is connected with each other, an external circumferential area of one (12) of the first and second sleeves and an internal circumferential area of another of the first and second sleeves (13) being connected.

With respect to Claim 12, the modification/combination meets all the limitations of Claim 12 (in Fig. 2 and [0039] of Busshoff et al.): the connection includes a substance (16) capable of adhesion ([0039] line 9).

With respect to Claim 13, the modification/combination meets all the limitations of Claim 13 (in Fig. 4 of Argiros): a length of the majority of the carbon fibers in the first sleeve (50) is between 90 and 100% of a length of the first sleeve (50).

With respect to Claim 14, the modification/combination meets all the limitations of Claim 14 (in Fig. 4 of Argiros): a length of the majority of the carbon fibers in the first sleeve (50) is between 95 and 100% of a length of the first sleeve (50).

With respect to Claim 15, the modification/combination meets all the limitations of Claim 15: the first sleeve (12 in Fig. 2 and [0044] of Busshoff et al.) is produced through the pultrusion method ([0044] line 2).

With respect to Claim 16, the modification/combination meets all the limitations of Claim 16: method according to claim 15, a long pipe (12 in Fig. 2 and [0044] lines 8 – 11 of Busshoff et al. where 12 has a cross section according to the shape of the die) is produced by the pultrusion ([0044] line 2) and the first sleeve (12) is made (produced) to

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length (up to 1 meter or more in [0050] lines 1 - 2) by at least one of sawing and another method of separation (as shown in Fig. 4 of Argiros).

With respect to Claim 17, the modification/combination meets all the limitations of Claim 17 (Figs. 3 - 4 and column 4 lines 24 – 31 of Argiros): the method according to claim 16, further comprising mounting a second sleeve (16.1) on at least one of the first sleeve and the long pipe (50), by at least one of winding and spinning fibers (16) on the circumferential area of the first sleeve (50), the fibers being embedded in a plastic matrix (column 2 lines 4 - 7).

With respect to Claim 18, the modification/combination meets all the limitations of Claim 18 (in Figs. 3 - 4 and column 4 lines 24 - 31 of Argiros): the cylinder according to claim 6, wherein the device for absorbing the torsional stress includes at least one ring (16).

With respect to Claim 19, the modification/combination meets all the limitations of Claim 19 (in Fig. 4d and column 4 lines 24 - 31 of Argiros): the cylinder according to claim 18, the ring (16) is arranged within the sleeve (50).

With respect to Claim 20, the modification/combination meets all the limitations of Claim 20 (Fig. 1 and column 2 lines 9 - 11 of Argiros): the cylinder according to claim 18, wherein the rings (16) includes carbon fibers (column 2 lines 9 – 11), which are aligned along the radial direction of the ring (16).

With respect to Claim 21, the modification/combination meets all the limitations of Claim 20 (Fig. 1 and column 3 lines 45 - 52 of Argiros): the cylinder according to claim 18, wherein the rings (cord) includes a metal (column 2 lines 9 - 14).

4. Claims 22 – 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Busshoff et al. in view of Argiros, and further in view of Suzue et al. (Patent No.: US 5686155).

With respect to Claim 22, the combination of Busshoff et al. and Argiros meets all the limitations of Claim 22 except that the metal is a steel.

However, Suzue et al. disclose in Figs. 1 - 7 and column 3 lines 5 - 29: the net-like (Figs. 1 and 4) metallic member (21) is a steel (iron in line 26) which is spirally and closely wound (column 5 lines 42 – 44) onto the main body (10).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the combination of Busshoff et al. and Argiros' cylinder by using the metallic (including steel) member for the device (ring) as taught by Suzue et al. for the purpose of improving the strength and impact-resistance of the hollow cylindrical member.

The modification/combination meets all the limitation of Claim 22.

With respect to Claim 23, the modification/combination meets all the limitation of Claim 23 (Fig. 3 and column 3 lines 13 – 16 of Suzue yet al.): the ring (21) has a cross sectional area, which deviates from a rectangular form (tapered edge).

With respect to Claim 24, the modification/combination meets all the limitation of Claim 24 (Fig. 5 and column 4 lines 52 - 55 of Suzue yet al.): the cylinder according to claim 23, wherein the ring (21) in layer 30 has a u-shaped profile (the outer periphery 30a is the bottom of u).

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yuan L. Chen whose telephone number is 571-270-3799. The examiner can normally be reached on Monday-Friday 7:30 AM to 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Ren L Yan/
Primary Examiner, Art Unit 2854